NUISANCE ANIMAL CONTROL PLAN

MINGO NATIONAL WILDLIFE REFUGE

Nuisance Animal Control Plan for Mingo National Wildlife Refuge

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Nuisance Animal Control Plan
Mingo National Wildlife Refuge

Introduction:

This Control Plan will cover control of invasive animal species on Mingo National Wildlife Refuge. The two primary nuisance species on Mingo NWR are beavers and feral hogs and both cause significant habitat damage.

Feral swine are a non-native animal found mostly across the southern half of Missouri. These wild pigs can have an adverse effect on the habitat and productivity of most native wildlife. They are omnivorous and use virtually all habitat components of the landscape, directly competing for food and reducing carrying capacities, reproduction, and recruitment of native wildlife. Feral hogs have are known to eat eggs and young of ground nesting birds, frogs, salamanders, and other reptiles. In addition, feral swine are documented as a source of several infectious diseases that adversely affect wildlife and livestock.

Feral swine populations are known on the refuge and in the surrounding areas adjacent to the refuge. Refuge staff should be aware and watchful of feral swine damage and once sign is observed, it will be absolutely imperative to eliminate or reduce the population before it gets established. Once feral swine have established a population, it is nearly impossible to eliminate all animals.

Beaver are native to the refuge, but can cause problems by girdling trees, constructing dams, and plugging culverts and water control structures. Beaver activity has caused some deterioration and loss of bottomland hardwood trees on the refuge. Although beavers do provide some beneficial wetland habitat on the refuge it is necessary to implement some form of monitoring and control, if necessary, to reduce the negative impacts on forest habitats. These control efforts will be essential in ensuring the protection of important bottomland hardwood forests and minimizing drainage problems associated with draw-downs of moist soil units.

I. Beaver

A. Description

The beaver is the largest North American rodent. Adults usually weigh between 30 and 40 pounds, but may weigh over 60 pounds. Beaver are semi-aquatic mammals that feed only on vegetation consisting primarily of bark, twigs, and leaves of hardwood trees and the stems and roots of herbaceous aquatic plants. Beavers cause substantial damage to natural resources on Mingo National Wildlife Refuge. Direct damage (i.e. cutting and girdling) of desireable tree

species and flooding of timber behind dams negatively effects both young and mature stands of bottomland hardwood forest.

B. Control Methods Recommended

1. Control Methods

Methods of control proposed for use on Mingo National Wildlife Refuge are those which have been proven effective in other areas and under a variety of circumstances and which have been proven to be species specific. These methods include free shooting and trapping areas that have heavy beaver activity which could pose a threat to timber health and survival. All free shooting and trapping will be conducted by refuge staff and/or qualified staff from other agencies only. However, if trapping by staff proves to be ineffective the refuge may consider using a "certified trapper" through the Missouri Department of Conservation. Beavers will be shot on sight by authorized personnel and disposed of by leaving carcasses in the forest. This will allow predators, scavengers, and other opportunistic carnivores to use the remains. Refuge personnel may take advantage of incidental shooting opportunities during routine visits to the beaver dam areas. Refuge personnel will remove dams and make sure water is not being held on timber.

Incidental control will be conducted by authorized refuge personnel in accordance with 50 CFR 30.11, 50 CFR 31.14, and 7 RM 14.9.

The policy of the Service is to engage in the control of wildlife within the National Wildlife Refuge System to assure balanced wildlife and fish populations consistent with the optimum management of refuge habitat. The objective of animal control management is to prevent substantial damage to refuge resources.

Title 50 CFR governs authorization of control practices, Part 31, Section 14:
(a) Animal species which are surplus or detrimental to the management program of a wildlife area may be taken in accordance with Federal and State laws and regulations by Federal or State personnel or by permit issued to private individuals.
(b) Animal species which are damaging or destroying Federal property within a wildlife refuge area may be taken or destroyed by Federal personnel.

2. Alternatives

One of the objectives of Mingo National Wildlife Refuge is to provide protection of fish and wildlife and provide habitat for migratory birds. A no action alternative would result in unacceptable levels of damage to natural resources on the refuge and adjacent private property. A multi-faceted approach involving several methods is the most practical and most effective.

C. Justification of Pest Control

One of the objectives of Mingo National Wildlife Refuge is to provide habitat and protection of migratory birds, fish and wildlife. The bottomland hardwood forest habitat on the refuge provides the habitat base needed to achieve this objective. Beavers are known for constructing dams in brakes/sloughs, which, hold water in these low areas causing timber to be stressed and/or die. With the decline in the market value of beaver pelts, the species began increasing in many places in southern Missouri Beaver populations in the 1930's, started multiplying, and there were many complaints of damage to crops and to valuable forest trees. The prices of beaver pelts are still so low that local trappers have no interest in trapping them. Beavers have important ecological value, but populations need to be managed to regulate damage to timber.

II. Feral Hog

A. Description

For the purposes of this control plan, the term feral hog shall be used to refer to both domestic pigs which are now free living and not under the ownership of humans and also to the introduced European wild boar. Feral hogs have become a problem in the last 3-5 years in southern Missouri and populations are steadily increasing in number. The primary reason for the expansion of hogs into Missouri is from "hog hunters" releasing hogs in areas for hunting purposes.

The introduced hogs have reproduced, spread and are now found throughout the refuge and on adjoining lands in southeast Missouri. Feral hogs are prolific, with reproductive rates four times that of native ungulate species (Taylor et al, 1998).

Since 2006, the refuge has noted an increase in feral hog numbers and the severity of the resource damage.

B. Assistance

Assistance has been provided to this station by a number of other offices and individuals on proper control techniques. A brief summary of contacts made concerning feral hog control efforts is given below.

1. Consultation with personnel of U.S. Corps. of Engineers personnel at Lake Wappeppello. Provided advice on control techniques and trap design.

2. Consultation with personnel of Missouri Department of Conservation. Provided advice on control techniques.

3. Consultation with personnel of Tensas River National Wildlife Refuge, Bayou Cocodrie National Wildlife Refuge, and the Central Louisiana National Wildlife Refuge Complex. Provided advice on trapping plan and control techniques.

C. Control Methods Recommended and Alternatives

1. Control Methods

Methods of control proposed for use on Mingo National Wildlife Refuge are those which have been proven effective in other areas and under a variety of circumstances and which have been proven to be species specific. These methods include free shooting, live trapping, and aerial gunning. All free shooting, aerial gunning, and live trapping efforts on the refuge will be conducted by refuge staff and/or qualified staff from other agencies. Feral hogs will be shot on sight by authorized personnel and disposed of by leaving carcasses in the forest. This will allow predators, scavengers, and other opportunistic carnivores to use the remains. Refuge personnel may take advantage of incidental shooting opportunities during routine visits to areas known to have hogs. The goal of control efforts shall be the eradication of feral hogs on Mingo National Wildlife Refuge. A measure of the control success will be based on amount of fresh hog sign and hog sightings following initiation of the control efforts. Methods such as utilizing Missouri Department of Conservation contracts with hog hunters will be re-evaluated if proposed methods prove to be unsuccessful. If utilizing dogs proves to be the most effective method of control, the refuge will utilize contractors through MDC, Corps of Engineers, or other partners in this effort.

Incidental control will be conducted by authorized refuge personnel in accordance with 50 CFR 30.11, 50 CFR 31.14, and 7 RM 14.9.

The policy of the Service is to engage in the control of wildlife within the National Wildlife Refuge System to assure balanced wildlife and fish populations consistent with the optimum management of refuge habitat. The objective of animal control management is to prevent substantial damage to refuge resources.

Title 50 CFR governs authorization of control practices, Part 31, Section 14:

(a) Animal species which are surplus or detrimental to the management program of a wildlife area may be taken in accordance with Federal and State laws and regulations by Federal or State personnel or by permit issued to private individuals.

(b) Animal species which are damaging or destroying Federal property within a wildlife refuge area may be taken or destroyed by Federal personnel.

Title 50 CFR, Part 30, Section 11 (a) states:

Feral animals, including horses, burros, cattle, swine, sheep, goats, reindeer, dogs, and cats, without ownership that have reverted to the wild from a domestic state may be taken by authorized Federal or State personnel or by private persons operating under a permit in accordance with applicable provisions of Federal or State law or regulation.

Live trapping shall be conducted using specially designed hog traps baited with whole corn or other suitable bait. Traps are designed to be species specific and allow non-target animals to escape from the trap. Traps may be designed with open tops to allow bears to climb out if they happen to get in the trap. Trapping will be conducted in the spring and summer when the refuge visitation is low. Refuge staff will go out to scout where there are repeated areas of hog activity. These areas should be pre-baited prior to setting of the live traps and once set the trap doors should be wired open until hogs are comfortable entering the trap. Such steps should result in multiple catches per trap, increasing the effectiveness of trapping efforts. Feral hogs caught in traps shall be humanely dispatched and disposed of in accordance with federal and state law.

2. Alternatives

Several alternatives to the proposed action were considered during development of the control/trapping plan for this station. Those considered include no action and re-location of hogs.

One of the objectives of Mingo National Wildlife Refuge is to provide protection of fish and wildlife. A proposal of no action would result in an increase in the number of feral hogs presently on the refuge. This would result in continued and increased damage to habitats and mast crop on the refuge and damage to walking trails and levees recently rehabilitated at great expense to the government. Rooting by hogs would result in increased maintenance dollars on moist soil levees and walking trails as well as present dangers to equipment and refuge personnel involved in maintenance of these trails and levees. Rooting and wallowing diminishes habitat and food quality by removing ground litter and vegetation. Disturbance of ground litter and vegetation affects the habitat quality for many species of birds, amphibians, and reptiles, small mammals, and insects.

Live trap feral swine on refuge lands and then transfer them to a release site off refuge lands. This practiced is discouraged because of the potential to create serious natural resource damage problems at release sites. This method also minimizes the on-going statewide effort to stop releases of hogs on private land.

D. Justification of Pest Control

One of the objectives of this station is to provide habitat and protection of migratory birds, fish and wildlife. The bottomland hardwood forests of the refuge provide the habitat base needed to achieve this objective. Feral hogs are non-native animal pests found throughout the refuge and on adjoining properties. Feral hogs have an adverse effect on habitat and productivity of most native wildlife. Since they are omnivores, feral hogs use virtually every component of the habitat, resulting in direct competition with native wildlife, reductions in carrying capacities, and adverse impacts to reproduction and recruitment. In addition, feral hogs serve as a source for many diseases that affect wildlife as well as domestic livestock. Some other problems feral hogs cause include soil erosion, leaching of minerals and nutrients, habitat destruction, native plant species destruction, exotic plant species invasion and maintenance, and changes in vegetative succession rates.

Feral hogs have already caused damage to a number of roads and trails from rooting. The presence of feral hogs provides no benefits to the refuge and with an increase in the present population the damage will only increase if feral hog numbers are not reduced.

Literature Cited

Taylor, R. B., Hellgren, E.C., Gabor, T.M. and Ilse, L.M. 1998. Reproduction of feral pigs in southern Texas. Journal of Mammalogy, 79(4):1325-1331.